

# Colorado Public Utility Commission's Xcel Wind Decision

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# Colorado PUC orders Xcel to negotiate for a wind plant

- Integrated Resource Planning Rule requires bidding for new generation
- Enron Wind bid: 162 MW in response to “conventional resource” RFP
- Xcel rejected the Enron bid
- Xcel added \$41m in back up costs
- Xcel claimed low gas prices

# Three important results in the decision

1. New wind predicted to cost less than new gas-fired generation.
2. Wind gets capacity value based on Xcel method and Xcel data.
3. Back up costs are not major.

# **1. Wind predicted to cost less than gas generation.**

- In 1999, Xcel predicted 2000 gas would decline by 7.42 percent!**
- Xcel's final gas cost prediction was for \$3.00 gas, declining in real terms over eighteen years.**
- The PUC found "a substantial probability" that gas would be higher than the Company's base forecast**
- "prudent to lean toward the higher range of the gas forecast to protect Colorado ratepayers"**

## **2. Wind capacity value based on Xcel method, data.**

- 1996 IRP settlement required Xcel to develop wind capacity value method**
- Xcel proposed production cost modeling with and without wind to determine capacity value**
- Advocates accepted the Xcel method**
- Xcel claimed the method was “generous” to wind in the 1999 IRP proceeding**
- PUC accepted the capacity value as “essentially settled”**

### **3. Back up costs are not major**

- Xcel argued that back up costs for wind added \$41 million in costs to the wind bid**
- Xcel calculated costs based on transmission imbalance penalties**
- Xcel attributed costs to cycling coal, not gas plant**
- Advocates responded that simple forecasting techniques reduce the need for back up power**
- PUC found Xcel's method unsupported and excessive, orders analysis based on combined effect of multiple wind farms**

# **“Purely economic grounds”**

- **“We find that adding Enron’s Lamar wind energy bid to PSCo’s preferred resource plan is in the public interest and comports with the IRP rules. This determination is based solely on our finding that the acquisition of the Lamar facility will likely lower the cost of electricity for Colorado’s ratepayers. After a careful analysis of the economics of the wind bid, we find that it is justified on purely economic grounds, without weighing other benefits of wind generation that could be considered under the IRP rules.”**

# Integrating large wind farms into electric operations

- **Utility Wind Interest Group study with Electrotek of operational impacts**
- **Bulk electricity markets operate on forward nomination of power sales offers**
- **Transmission service tariffs require firm transmission rights**
- **Non-firm transmission for wind is not accepted by lenders**

# LAW Fund, CRES, PUC Staff

- **The Land and Water Fund of the Rockies--John Nielsen, Jim Caldwell, and Mike Milligan (NREL)**
- **The Colorado Renewable Energy Society--Ronald Larson, Steve Andrews**
- **PUC Staff--Saeed Barhaghi**
- **THANKS!**